

Bet you never thought your body had much in common with a rain forest or a coral reef. But for zillions of microscopic critters, you are a walking, breathing, living ecosystem—a complex community of interdependent organisms that inhabit the same environment.

So many bacteria live on your body that they outnumber human cells by at least one hundred to one. They account for about ten percent of your body weight. Washing removes many bacteria, but they reproduce so quickly—doubling as fast as every twenty minutes—that the population is restored within hours.

## Head

Millions of bacteria pack into every square inch of your scalp, clumping around the base of each strand of hair.

## Lungs

Billions of microbes get tangled in nose hairs or trapped in mucus that lines

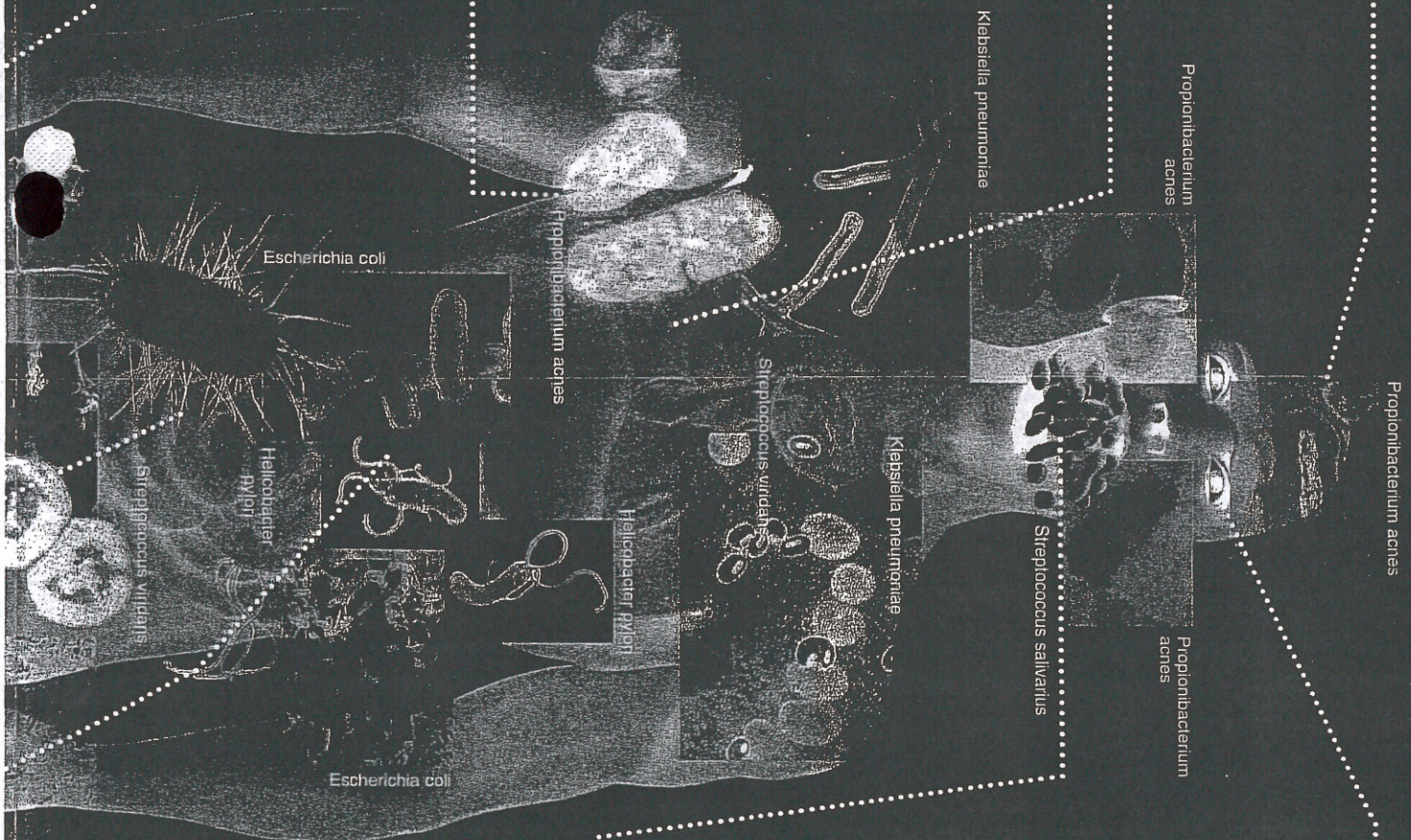
nasal cavities. Cilia, or small hairs, beat upward to push the mucus into the nose, where it is expelled, or into the throat, where it is swallowed. As a result, few microbes live in the lungs unless the mucus has been damaged by smoking.

## Armpits

Microbes love moist, sweaty places where they chomp down on beads of sweat. The sweat doesn't smell bad. Underarm odor comes from the waste products excreted by the bacteria.

## Hands

Not many microbes live on your hands.



## Eyes

Ever wonder why you close your eyes when you sneeze? Many scientists think it is to protect your eyes from the microbes that come flying out of your nose. Blinking and tearing also prevent microbes from settling on the moist outer surface of your eyes. (The first antibiotic, lysozyme, was found in tears by Alexander Fleming—the same man who later discovered penicillin.)

## Mouth

Microbes romp around your tongue and teeth. Saliva washes many of them into your stomach, but millions remain. Just eat a piece of candy and feel the coating that develops over your teeth in about five minutes. It's slime produced by one of the species of bacteria that live in your mouth. The slime helps the bacteria stick together, forming



# Microbe

Microbes live on your hands, unless you don't wash them. However, microbes do like your fingernails—a handy shelter for hiding in the dirt or food that gets stuck there.

*Klebsiella pneumoniae*



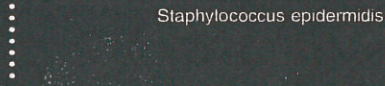
*Epidermophyton floccosum*



## Skin

Bacteria are all over your skin. They keep away disease-carrying microbes by seizing any available space, food, or other resources that might give the invaders a foothold.

*Staphylococcus epidermidis*



## Feet

Microbes—especially bacteria and fungi—like the warm, sweaty conditions inside your shoes. They crawl between your toes and around your toenails. Blame smelly socks on sweat-eating bacteria. Fungi get the credit for causing the cracking, itching, and burning known as athlete's foot.

*Staphylococcus aureus*



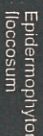
*Staphylococcus aureus*



*Staphylococcus epidermidis*



*Epidermophyton floccosum*



## Stomach

A microbe falling into the stomach drops into stomach acids and digestive enzymes, the chemicals that break up food. Only a few hardy bacteria, such as *Helicobacter pylori*, survive.

## Intestines

Microbes by the trillions live in the intestines of every human. Most of these bacteria perform important tasks, such as crowding out harmful bacteria or producing vitamins. One species digests the carbohydrates that humans can't digest, producing stomach gases called flatulence, or farts. The intestinal cells repay the bacteria by making fructose, a kind of sugar, whenever the bacteria send out chemical signals "asking" for a treat.

*Epidermophyton floccosum*



*Epidermophyton floccosum*

